

	)	<b>Departmental</b>
<b>Maine Correctional Center</b>	)	<b>Findings of Fact and Order</b>
<b>Cumberland County</b>	)	<b>Air Emission License</b>
<b>South Windham, Maine</b>	)	<b>After-the-Fact</b>
<b>A-129-71-G-M</b>	)	<b>Amendment #2</b>

After review of the air emissions license amendment application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

## **I. REGISTRATION**

### **A. Introduction**

Maine Correctional Center of South Windham, Maine was issued Air Emission License A-129-71-E-N on August 8, 2000, and subsequently amended their license in amendment A-129-71-F-M, permitting operation of emission sources associated with their correctional facility.

Maine Correctional Center has requested a minor revision to their license in order to:

- Convert their two #4 fuel oil fired boilers to fire either #2 fuel oil and natural gas.
- Clarify the number of emergency generators located at the facility. Air Emission License A-129-71-F-M permitted Maine Correctional Center to install a third emergency generator; this installation never took place and Maine Correctional Center continues to operate Emergency Generators #1 and #2 as indicated in A-129-71-E-N.

### **B. Application Classification**

The modification of a minor source is considered a major modification based on whether or not expected emission increases exceed the "Significant Emission Levels" as given in Maine's Air Regulations. This modification has been determined to be a minor revision and has been processed as such.

## **II. BEST PRACTICAL TREATMENT (BPT)**

In order to receive a license the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment

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(BPT), as defined in Chapter 100 of the Department regulations. Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas. BPT for new sources and modifications requires a demonstration that emissions are receiving Best Available Control Technology (BACT), as defined in Chapter 100 of the Air Regulations. BACT is a top-down approach to selecting air emission controls considering economic, environmental and energy impacts.

To maximize operational flexibility, Maine Correctional Center is proposing to replace #4 fuel oil with #2 fuel oil or natural gas as the fuel in their boilers. #2 fuel oil and natural gas are both cleaner burning fuels than #4 fuel oil, resulting in a decrease of emissions per gallon of fuel burned in the boilers. The Department therefore considers BACT for Boilers #1 and #2 to be the firing of either #2 fuel oil with a sulfur content not to exceed 0.35%, or natural gas, as fuel. Maine Correctional Center shall be limited to  $36.8 \times 10^6$  scf per year to be fired in Boilers #1 and #2. This amount of natural gas is equivalent to the heating value of 250,000 gallons of #4 fuel oil, the fuel limit for the boilers in the previous license. Maine Correctional Center shall not exceed 250,000 gallons of #2 fuel oil, with a maximum sulfur content of 0.35% to be fired in the boilers.

Annual emissions for the facility are calculated by combining the previously licensed limits for Boilers #1 and #2 firing #4 fuel oil, and the two emergency diesel generators, then replacing the boiler emissions with their emissions firing the maximum license allowed amount of natural gas and #2 fuel oil.

**Total Allowable Annual Emission for the Facility**  
(used to calculate the annual license fee)

<b>Pollutant</b>	<b>Boilers Firing Fuel Oil</b>	<b>Boilers Firing Natural Gas</b>	<b>Emergency Gen #1 and #2</b>	<b>Total Tons/Year</b>
PM	1.4	0.94	0.05	2.39
PM <sub>10</sub>	1.4	0.94	0.05	2.39
SO <sub>2</sub>	6.2	0.02	0.02	6.24
NO <sub>x</sub>	7.0	1.84	1.81	10.65
CO	0.63	1.54	0.39	2.56
VOC	0.03	0.10	0.14	0.27

## ORDER

Based on the above Findings and subject to conditions listed below, the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License Minor Revision A-129-71-G-M, subject to the conditions found in Air Emission License A-129-71-E-N, in amendment A-129-F-M and in the following conditions:

**The following replaces Condition (16) of License A-129-71-E-N:**

**(16) Boilers #1 and #2**

- A. Boilers #1 and #2 shall fire natural gas or #2 fuel oil. Maine Correctional Center shall not exceed  $36.8 \times 10^6$  scf of natural gas per year, on a 12-month rolling total basis. Compliance shall be demonstrated through fuel use receipts maintained on a monthly and 12 month rolling basis. Fuel oil fired in Boilers #1 and #2 shall not exceed a sulfur content of 0.35% by weight, and Maine Correctional Center shall not exceed 250,000 gallons of fuel oil per year on a 12 month rolling total. Compliance shall be demonstrated through fuel use records and purchase receipts showing the sulfur content of the fuel maintained on a monthly and 12 month rolling basis.
- B. Emissions from the boilers shall not exceed the following:

**Boiler #1 and #2 Emission Limits  
(per boiler)**

	Firing Fuel Oil		Firing Natural Gas	
	lb/MMBtu	lb/hr	lb/MMBtu	lb/hr
<b>PM</b>	0.08	1.34	0.05	0.84
<b>PM<sub>10</sub></b>	--	1.34	--	0.84
<b>SO<sub>2</sub></b>	--	5.9	--	0.01
<b>NO<sub>x</sub></b>	--	6.68	--	1.64
<b>CO</b>	--	0.56	--	1.38
<b>VOC</b>	--	0.02	--	0.09

Compliance shall be demonstrated on request of the Department through stack testing in accordance with the appropriate method found in 40 CFR Part 60, Appendix A.

**The following replaces Condition (17) of License A-129-71-E-N:**

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- (17) Visible emissions from Boilers #1 and #2 (stack #1), when firing natural gas shall not exceed 10% opacity on a 6 minute block average. Visible emissions from Boilers #1 and #2 (stack #1), when firing fuel oil, shall not exceed 20% opacity on a 6 minute block average.

**The following are new Conditions:**

- (25) Maine Correctional Center shall pay the annual air emission license fee within 30 days of December 31 of each year. Pursuant to 38 MRSA §353-A, failure to pay this annual fee in the stated timeframe is sufficient grounds for revocation of the license under 38 MRSA §341-D, subsection 3.
- (26) This amendment shall expire concurrently with Air Emission License A-129-71-E-N.

DONE AND DATED IN AUGUSTA, MAINE THIS \_\_\_\_\_ DAY OF \_\_\_\_\_ 2003.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: \_\_\_\_\_  
DAWN R. GALLAGHER, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: January 13, 2003

Date of application acceptance: January 13, 2003

Date filed with the Board of Environmental Protection: \_\_\_\_\_

This Order prepared by Rachel E. Pilling, Bureau of Air Quality